

WHAT IS CLAIMED IS:

1 1. For use in a telecommunications system having a serving radio network
2 controller (SRNC) which controls a connection with a user equipment unit and a drift
3 radio network controller (DRNC), a method comprising transmitting from the drift
4 radio network controller (DRNC) to the serving radio network controller (SRNC) a
5 filtering rule for a candidate cell, the filtering rule providing criteria for determining
6 whether the candidate cell qualifies for inclusion in a measurement list of cells for the
7 user equipment unit.

1 2. The method of claim 1, further comprising performing a handover of the user
2 equipment unit to a target cell controlled by the drift radio network controller (DRNC)
3 whereby the user equipment unit utilizes resources including radio resources of the
4 target cell, and wherein the candidate cell is a neighboring cell for the target cell.

1 3. The method of claim 1, wherein the filtering rule is a list of subscriber groups
2 which are allowed for the candidate cell.

1 4. The method of claim 1, wherein the filtering rule is a list of subscriber groups
2 which are not allowed for the candidate cell

1 5. The method of claim 1, wherein the filtering rule is a list of PLMN identifiers
2 or IMSI ranges which are allowed for the candidate cell.

1 6. The method of claim 1, wherein the filtering rule is a list of PLMN identifiers
2 or IMSI ranges which are not allowed for the candidate cell

1 7. The method of claim 1, wherein the filtering rule is stored in the drift radio
2 network controller (DRNC) as a bitmap.

1 8. The method of claim 1, further comprising transmitting from the drift radio
2 network controller (DRNC) to the serving radio network controller (SRNC) filtering
3 rules for plural candidate cells.

1 9. The method of claim 8, further comprising:
2 associating a group of plural candidate cells with a common filtering rule;
3 transmitting the common filtering rule to the serving radio network controller
4 (SRNC) only once rather than for each candidate cell in the group.

1 10. The method of claim 1, wherein in conjunction with a first user equipment
2 unit the filtering rule for the candidate cell is transmitted to the serving radio network
3 controller (SRNC), and wherein for a second user equipment unit the filtering rule for
4 the candidate cell is not transmitted so long as the filtering rule for the candidate cell
5 remains unchanged; and

6 transmitting a measurement list of cells to the second user equipment unit on the
7 basis of the filtering rule for the candidate cell as obtained from the drift radio network
8 controller (DRNC) in conjunction with the first user equipment unit.

1 11. The method of claim 10, further comprising:
2 the serving radio network controller (SRNC) apprising the drift radio network
3 controller (DRNC) of the serving radio network controller's (SRNC) current version of
4 the filtering rule for the candidate cell;
5 the drift radio network controller (DRNC) determining whether the filtering rule
6 for the candidate cell is unchanged relative to the serving radio network controller's
7 (SRNC) current version of the filtering rule.

1 12. The method of claim 1, further comprising:
2 transmitting an international mobile subscriber identity (IMSI) of the user
3 equipment unit from the serving radio network controller (SRNC) to the drift radio
4 network controller (DRNC);
5 using the filtering rule at the drift radio network controller (DRNC) to determine
6 whether another cell qualifies for inclusion in the measurement list for the user
7 equipment unit, the another cell being other than the candidate cell.

1 13. The method of claim 12, further comprising, after using the filtering rule at
2 the drift radio network controller (DRNC), transmitting from the drift radio network
3 controller (DRNC) to the serving radio network controller (SRNC) a list of one or more
4 qualifying cells for inclusion in the measurement list.

1 14. The method of claim 12, further comprising the serving radio network
2 controller (SRNC) sending a permission message to the drift radio network controller
3 (DRNC) whereby the drift radio network controller (DRNC) is given permission to use
4 the filtering rule.

1 15. The method of claim 12, further comprising optionally using the filtering
2 rule at the drift radio network controller (DRNC) to determine whether the another cell
3 qualifies for inclusion in the measurement list for the user equipment unit.

1 16. The method of claim 12, wherein the step of transmitting the international
2 mobile subscriber identity (IMSI) of the user equipment unit from the serving radio
3 network controller (SRNC) to the drift radio network controller (DRNC) occurs after
4 transmitting the filtering rule for the candidate cell to the serving radio network
5 controller (SRNC).

1 17. The method of claim 1, further comprising operating both the serving radio
2 network controller (SRNC) and the drift radio network controller (DRNC) as a shared
3 network.

1 18. The method of claim 1, further comprising operating the serving radio
2 network controller (SRNC) and the drift radio network controller (DRNC) as separate
3 networks whereby cells controlled by the serving radio network controller (SRNC)
4 have differing filtering rules than cells controlled by the drift radio network controller
5 (DRNC)..

1 19. The method of claim 1, further comprising having differing filtering rules
2 for cells controlled by a same radio network controller (RNC).
3

1 20. The method of claim 1, wherein the filtering rule is stored per cell relation,
2 where a cell relation points to a target cell to which a source cell can handover.

1 21. For use in a telecommunications system having a serving radio network
2 controller (SRNC) which controls a connection with a user equipment unit and a drift
3 radio network controller (DRNC), a method comprising:

4 setting up a radio link for the connection with the user equipment unit in a
5 selected cell controlled by the drift radio network controller (DRNC);

6 transmitting from the drift radio network controller (DRNC) to the serving radio
7 network controller (SRNC) a filtering rule for a candidate cell, the filtering rule
8 providing criteria for determining whether the candidate cell qualifies for inclusion in a
9 measurement list of cells for the user equipment unit; then subsequently

10 receiving at the serving radio network controller (SRNC) an international mobile
11 subscriber identity (IMSI) for the user equipment unit; and

12 using the international mobile subscriber identity (IMSI) to check at least one of
13 the following:

- 14 (1) whether the measurement list for the user equipment unit should be updated
15 to delete the candidate cell;
16 (2) whether the radio link for the selected cell should be removed.

1 22. The method of claim 21, further comprising using the international mobile
2 subscriber identity (IMSI) and the filtering rule to determine whether the measurement
3 list for the user equipment unit should be updated to delete the candidate cell.

1 23. The method of claim 22, further comprising deleting the candidate cell from
2 the measurement list for the user equipment unit.

1 24. The method of claim 21, further comprising using the international mobile
2 subscriber identity (IMSI) at the serving radio network controller (SRNC) to perform
3 checking.

1 25. The method of claim 21, further comprising:
2 sending the international mobile subscriber identity (IMSI) from the serving
3 radio network controller (SRNC) to the drift radio network controller (DRNC); and
4 using the international mobile subscriber identity (IMSI) at the drift radio
5 network controller (DRNC) to perform checking.

1 26. The method of claim 21, further comprising operating both the serving radio
2 network controller (SRNC) and the drift radio network controller (DRNC) as a shared
3 network.

1 27. The method of claim 21, further comprising operating the serving radio
2 network controller (SRNC) and the drift radio network controller (DRNC) as separate
3 networks whereby cells controlled by the serving radio network controller (SRNC)
4 have differing filtering rules than cells controlled by the drift radio network controller
5 (DRNC)..

1 28. The method of claim 21, further comprising having differing filtering rules
2 for cells controlled by a same radio network controller (RNC).

1 29. A telecommunications system comprising:
2 a serving radio network controller (SRNC) which controls a connection with a
3 user equipment unit;
4 a drift radio network controller (DRNC) which transmits to the serving radio
5 network controller (SRNC) a filtering rule for a candidate cell, the filtering rule
6 providing criteria for determining whether the candidate cell qualifies for inclusion in a
7 measurement list of cells for the user equipment unit.

1 30. The apparatus of claim 29, further comprising an inter-RNC link over which
2 the filtering rule is transmitted from the drift radio network controller (DRNC) to the
3 serving radio network controller (SRNC).

1 31. The apparatus of claim 29, wherein the filtering rule is stored at the drift
2 radio network controller (DRNC), and wherein the filtering rule is a list of subscriber
3 groups which are allowed for the candidate cell.

1 32. The apparatus of claim 29, wherein the filtering rule is stored at the drift
2 radio network controller (DRNC), and wherein the filtering rule is a list of subscriber
3 groups which are not allowed for the candidate cell

1 33. The apparatus of claim 29, wherein the filtering rule is stored at the drift
2 radio network controller (DRNC), and wherein the filtering rule is a list of PLMN
3 identifiers or IMSI ranges which are allowed for the candidate cell.

1 34. The apparatus of claim 29, wherein the filtering rule is stored at the drift
2 radio network controller (DRNC), and wherein the filtering rule is a list of PLMN
3 identifiers or IMSI ranges which are not allowed for the candidate cell

1 35. The apparatus of claim 29, wherein the filtering rule is stored at the drift
2 radio network controller (DRNC) as a bitmap.

1 36. The apparatus of claim 29, wherein the drift radio network controller
2 (DRNC) transmits to the serving radio network controller (SRNC) filtering rules for
3 plural candidate cells.

1 37. The apparatus of claim 36, wherein a group of plural candidate cells are
2 associated with a common filtering rule, and wherein the drift radio network controller
3 (DRNC) transmits the common filtering rule to the serving radio network controller
4 (SRNC) only once rather than for each candidate cell in the group.

1 38. The apparatus of claim 29, wherein:
2 in conjunction with a first user equipment unit the drift radio network controller
3 (DRNC) transmits the filtering rule for the candidate cell to the serving
4 radio network controller (SRNC), and wherein for a second user equipment unit the
5 drift radio network controller (DRNC) does not transmit the filtering rule for the
6 candidate cell so long as the filtering rule for the candidate cell remains unchanged;
7 the serving radio network controller (SRNC) transmits a measurement list of
8 cells to the second user equipment unit on the basis of the filtering rule for the
9 candidate cell as obtained from the drift radio network controller (DRNC) in
10 conjunction with the first user equipment unit.

1 39. The apparatus of claim 38, wherein:
2 the serving radio network controller (SRNC) apprises the drift radio network
3 controller (DRNC) of the serving radio network controller's (SRNC) current version of
4 the filtering rule for the candidate cell;
5 the drift radio network controller (DRNC) determines whether the filtering rule
6 for the candidate cell is unchanged relative to the serving radio network controller's
7 (SRNC) current version of the filtering rule.

1 40. The apparatus of claim 29, wherein:

2 the serving radio network controller (SRNC) transmits an international mobile
3 subscriber identity (IMSI) of the user equipment unit to the drift radio network
4 controller (DRNC);

5 the drift radio network controller (DRNC) uses the filtering rule to determine
6 whether another cell qualifies for inclusion in the measurement list for the user
7 equipment unit, the another cell being other than the candidate cell.

1 41. The apparatus of claim 40, wherein the drift radio network controller
2 (DRNC), after using the filtering rule at the drift radio network controller (DRNC),
3 transmits to the serving radio network controller (SRNC) a list of one or more
4 qualifying cells for inclusion in the measurement list.

1 42. The apparatus of claim 40, wherein the serving radio network controller
2 (SRNC) sends a permission message to the drift radio network controller (DRNC)
3 whereby the drift radio network controller (DRNC) is given permission to use the
4 filtering rule.

1 43. The apparatus of claim 40, wherein the drift radio network controller
2 (DRNC) optionally uses the filtering rule to determine whether the another cell
3 qualifies for inclusion in the measurement list for the user equipment unit.

1 44. The apparatus of claim 29, wherein the serving radio network controller
2 (SRNC) and the drift radio network controller (DRNC) are a shared network.

1 45. The apparatus of claim 29, wherein the serving radio network controller
2 (SRNC) and the drift radio network controller (DRNC) are separate networks whereby
3 cells controlled by the serving radio network controller (SRNC) have differing filtering
4 rules than cells controlled by the drift radio network controller (DRNC)..

1 46. The apparatus of claim 29, wherein differing filtering rules exist for cells
2 controlled by a same radio network controller (RNC).

1 47. The apparatus of claim 29, wherein the filtering rule is stored per cell
2 relation, where a cell relation points to a target cell to which a source cell can handover.

1 48. A drift radio network controller (DRNC) of a telecommunications system
2 which transmits to a serving radio network controller (SRNC) a filtering rule for a
3 candidate cell, the filtering rule providing criteria for determining whether the candidate
4 cell qualifies for inclusion in a measurement list of cells for the user equipment unit.

1 49. The apparatus of claim 48, wherein the filtering rule is stored at the drift
2 radio network controller (DRNC), and wherein the filtering rule is a list of PLMN
3 identifiers or IMSI ranges which are compatible with the candidate cell.

1 50. The apparatus of claim 48, wherein the filtering rule is stored at the drift
2 radio network controller (DRNC), and wherein the filtering rule is a list of PLMN
3 identifiers or IMSI ranges which are not compatible with the candidate cell

1 51. The apparatus of claim 48, wherein the filtering rule is stored at the drift
2 radio network controller (DRNC) as a bitmap.

1 52. The apparatus of claim 48, wherein the filtering rule is stored at the drift
2 radio network controller (DRNC), and wherein the filtering rule is a list of subscriber
3 groups which are allowed for the candidate cell.

1 53. The apparatus of claim 48, wherein the filtering rule is stored at the drift
2 radio network controller (DRNC), and wherein the filtering rule is a list of subscriber
3 groups which are not allowed for the candidate cell

1 54. The apparatus of claim 48, wherein the drift radio network controller
2 (DRNC) transmits to the serving radio network controller (SRNC) filtering rules for
3 plural candidate cells.

1 55. The apparatus of claim 54, wherein a group of plural candidate cells are
2 associated with a common filtering rule, and wherein the drift radio network controller
3 (DRNC) transmits the common filtering rule to the serving radio network controller
4 (SRNC) only once rather than for each candidate cell in the group.

1 56. The apparatus of claim 48, wherein in conjunction with a first user
2 equipment unit the drift radio network controller (DRNC) transmits the filtering rule for

3 the candidate cell is transmitted to the serving radio network controller (SRNC), and
4 wherein for a second user equipment unit the drift radio network controller (DRNC)
5 does not transmit the filtering rule for the candidate cell so long as the filtering rule for
6 the candidate cell remains unchanged.

1 57. The apparatus of claim 54, wherein:

2 the serving radio network controller (SRNC) apprises the drift radio network
3 controller (DRNC) of the serving radio network controller's (SRNC) current version of
4 the filtering rule for the candidate cell;

5 the drift radio network controller (DRNC) determines whether the filtering rule
6 for the candidate cell is unchanged relative to the serving radio network controller's
7 (SRNC) current version of the filtering rule.

1 58. The apparatus of claim 48, wherein:

2 the drift radio network controller (DRNC) receives an international mobile
3 subscriber identity (IMSI) of the user equipment unit from the serving radio network
4 controller (SRNC);

5 the drift radio network controller (DRNC) uses the filtering rule to determine
6 whether another cell qualifies for inclusion in the measurement list for the user
7 equipment unit, the another cell being other than the candidate cell.

1 59. The apparatus of claim 58, wherein the drift radio network controller
2 (DRNC), after using the filtering rule at the drift radio network controller (DRNC),
3 transmits to the serving radio network controller (SRNC) a list of one or more
4 qualifying cells for inclusion in the measurement list.

1 60. The apparatus of claim 58, wherein the drift radio network controller
2 (DRNC) receives a permission message from the serving radio network controller
3 (SRNC) whereby the drift radio network controller (DRNC) is given permission to use
4 the filtering rule.

1 61. The apparatus of claim 58, wherein the drift radio network controller
2 (DRNC) optionally uses the filtering rule to determine whether the another cell
3 qualifies for inclusion in the measurement list for the user equipment unit..

1 62. The apparatus of claim 48, wherein the filtering rule is stored per cell
2 relation, where a cell relation points to a target cell to which a source cell can handover.

1 63. A telecommunications system comprising:
2 a serving radio network controller (SRNC) which controls a connection with a
3 user equipment unit;
4 a drift radio network controller (DRNC);
5 wherein the serving radio network controller (SRNC) sets up a radio link for the
6 connection with the user equipment unit in a selected cell controlled by the drift radio
7 network controller (DRNC);
8 wherein the drift radio network controller (DRNC) transmits to the serving radio
9 network controller (SRNC) a filtering rule for a candidate cell, the filtering rule
10 providing criteria for determining whether the candidate cell qualifies for inclusion in a
11 measurement list of cells for the user equipment unit;
12 wherein upon receiving an international mobile subscriber identity (IMSI) for
13 the user equipment unit; one of the serving radio network controller (SRNC) and the
14 drift radio network controller (DRNC) uses the international mobile subscriber identity
15 (IMSI) to check at least one of the following:
16 (1) whether the measurement list for the user equipment unit should be updated
17 to delete the candidate cell;
18 (2) whether the radio link for the selected cell should be removed.

1 64. The apparatus of claim 63, wherein the serving radio network controller
2 (SRNC) uses the international mobile subscriber identity (IMSI) and the filtering rule to
3 determine whether the measurement list for the user equipment unit should be updated
4 to delete the candidate cell.

1 65. The apparatus of claim 63, wherein the serving radio network controller
2 (SRNC) removes the radio link for the selected cell.

1 66. The apparatus of claim 63, wherein the serving radio network controller
2 (SRNC) deletes the candidate cell from the measurement list for the user equipment
3 unit.

1 67. The apparatus of claim 63, wherein the drift radio network controller
2 (DRNC) uses the international mobile subscriber identity (IMSI) and the filtering rule
3 to determine whether the measurement list for the user equipment unit should be
4 updated to delete the candidate cell.

1 68. The apparatus of claim 63, wherein the drift radio network controller
2 (DRNC) removes the radio link for the selected cell.

1 69. The apparatus of claim 63, wherein the drift radio network controller
2 (DRNC) deletes the candidate cell from the measurement list for the user equipment
3 unit.